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TM 11-6625-639-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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ORGANIZATIONAL MAINTENANCE
MANUAL

TEST SET, POWER SUPPLY
AN/FPM-26

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HEADQUARTERS, DEPARTMENT OF THE ARMY

1965

32/6

WARNING

Be careful when working on the 115-volt ac line, and the +150, +300, +275, -275, +300, and +400-volt dc circuits. Serious injury or death may result from contact with these terminals.

DON'T TAKE CHANCES!

THE FOLLOWING EXTREMELY DANGEROUS VOLTAGES

EXIST IN TEST SET, POWER AN/FPM-26 WHEN

POWER SUPPLY PP-3743/FPA IS UNDER TEST:

+1,650 volts, -6,400-volts

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CHANGE }
No. 1 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 15 November 1967
mt 1-22-68

Operator, Organizational Maintenance Manual Including Repair Parts and Special Tool Lists TEST SET, POWER SUPPLY AN/FPM-26

TM 11-6625-639-12, 12 October 1965, is changed as follows
Title is changed as shown above.

Page 3. Make the following changes:

Paragraph 1-2. Delete and substitute:

1-2. Indexes of Publications

Refer to the latest issues of DA Pam 310-4 and DA Pam 310-7 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

Paragraph 1-3. Delete and substitute:

1-3. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58 (Army), NAVSUP Publication 378 (Navy), AFR 71-4

(Air Force), and MCO P4610-5 (Marine Corps).

c. *Discrepancy in Shipment Report (DISREP) (SF361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF361) as prescribed in AR 55-38 (Army), NAVSUP Pub 459 (Navy), AFM 75-34 (Air Force), and MCO P4610.19 (Marine Corps).

d. *Reporting of Equipment Manual Improvements.* Report of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-ME-NMP-AD, Fort Monmouth, N. J., 07703.

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*This change together with C 1, 15 November 1967, TM 11-6625-639-45, 25 August 1966, supersedes TM 11-6625-639-25P, 11 May 1966.

APPENDIX II BASIC ISSUE ITEMS

Section I. INTRODUCTION

A2-1. General

This appendix lists items comprising an operable equipment and those required for installation, operation, or operator's maintenance for Test Set, Power Supply AN/FPM-26.

A2-2. Explanation of Columns

a. *Source, Maintenance, and Recoverability Codes (SMR), Column 1.* The first column on the left of the basic issue items list contains the source, maintenance, and recoverability (SMR) codes.

- (1) *Source code.* The source code is the letter appearing on the left in the SMR column. It indicates the source from which the item is obtained in accordance with the following:

Code	Explanation
P	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army Supply system, and authorized for use at indicated maintenance categories.
A	Applies to assemblies that are not procured or stocked as such but are made up of two or more units, each of which carries an individual stock number and description and is procured and stocked and can be assembled by units at indicated maintenance categories.
X	Applies to parts and assemblies that are not procured or stocked, the mortality of which normally is below that of the applicable end item; and the failure of which should result in retirement of the end item from the supply system.

- (2) *Maintenance code.* The maintenance code is the letter appearing in the center of the SMR column. It indicates the lowest category of maintenance authorized to install the listed item. The codes are:

Code	Explanation
O	Organizational maintenance
D	Depot maintenance

- (3) *Recoverability code.* The right hand letter in the SFR column indicates whether the item should be returned for recovery or salvage. Recoverability code is:

Note. When no code is indicated in the recoverability column the part will be considered expendable.

Code	Explanation
R	Applies to repair parts and assemblies that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.

b. *Federal Stock Number, Column 2.* This column indicates the Federal stock number for the item.

c. *Description, Column 3.* This column indicates the Federal item name and any additional description of the item required. A part number or other reference number is followed by the applicable five-digit Federal Supply Code for Manufacturers.

Note. Usable on code column is not used.

d. *Unit of Issue, Column 4.* The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc) is noted in this column.

e. *Quantity Incorporated in Unit Pack, Column 5.* Not used.

f. *Quantity Incorporated in Unit, Column 6.* This column indicates the quantity of the item used in the equipment.

g. *Quantity Furnished with Equipment, Column 7.* This column indicates the quantity of an item furnished with the equipment in excess of the quantity incorporated in the unit.

h. *Quantity Authorized.* Not used.

i. *Illustrations, Column 9.*

- (1) *Figure number, column 9a.* The number of the illustration in which the item is shown is indicated in this column.
- (2) *Item or symbol number, column 9b.* Not used.

SECTION II BASIC ISSUE ITEMS

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) QTY FURN WITH EQUIP	(8) QTY AUTH	(9) ILLUSTRATIONS	
								(a) FIG. NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
A-O-R	6625-905-7159	TEST SET, POWER SUPPLY AN/PPM-26: SMD536471; 80063 (This item is nonexpendable) TECHNICAL MANUAL TM 11-6625-639-12 Requisition through pinpoint account numbers if assigned; otherwise through nearest Adjutant General facility. NOTE: A quantity of one technical manual is authorized with each equipment. Where a valid need exists, additional copies may be requisitioned and kept on hand.	ea					1-1	
			ea		1	1		1-1	
A-O-R	6625-903-3497	TEST SET, POWER SUPPLY TS-2040/PPM-26: SMD536492; 80063	ea		1	1		1-1	
X-D	6625-903-3496	CASE, TEST SET CY-4215/PPM-26: SMD536474-2; 80063	ea		1	1		1-1	
X-D	6625-908-4828	COVER, TEST SET CW-736/PPM-26: SMD536474-1; 80063	ea		1	1		1-1	
X-D	6625-908-4833	COVER, TEST SET CW-737/FPA: SMD536474-3; 80063	ea		1	1		1-1	
P-O	5920-681-4998	FUSE, CARTRIDGE: SMB536899; 80063	ea		1	7		1-1	
P-O	6240-682-3411	LAMP, GLOW: NE51H; 81349	ea		7	9		1-1	
P-O	6240-155-8706	LAMP, INCANDESCENT: MS15571-2; 96906 NO ACCESSORIES, TOOLS, OR TEST EQUIPMENT ARE TO BE ISSUED WITH THIS EQUIPMENT NO BASIC ISSUE ITEMS ARE MOUNTED IN OR ON THIS EQUIPMENT	ea		3	5		1-1	

APPENDIX IV ORGANIZATIONAL REPAIR PARTS

Section I. INTRODUCTION

A4-1. General

This appendix contains a list of repair parts required for the performance of organizational maintenance for Test Set, Power Supply AN/FPM-26.

Note. No special tools, test, and support equipment are required.

A4-2. Explanation of Sections

This repair parts list is divided into two sections.

a. Repair Parts for Organizational Maintenance, Section II. A list of repair parts authorized for the performance of maintenance at the organizational category.

b. Federal Stock Number Cross Reference to Index Number, Section III. An index of Federal stock numbers to index numbers.

A4-3. Explanation of Columns

Following is an explanation of the columns in section II.

a. Source, Maintenance, and Recoverability Codes (SMR), Column 1. The first column on the left of the repair parts list contains the source, maintenance, and recoverability (SMR) codes, where applicable, and an index number listed directly below the SMR codes in ascending order. The index number is related to automatic data processing in supply functions, but may also be used as a locator for the line item, when reference designations are not in alphanumerical sequence. The SMR codes used in this list are—

- (1) *Source code.* The source code is the letter appearing on the left in the SMR column. It indicates the source from which the item is obtained in accordance with the following:

<i>Code</i>	<i>Explanation</i>
P__	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.

A__	Applies to assemblies that are not procured or stocked as such but are made up of two or more units, each of which carries an individual stock number and description and is procured and stocked and can be assembled by units at indicated maintenance categories.
-----	--

- (2) *Maintenance code.* The maintenance code is the letter appearing in the center of the SMR column. It indicates the lowest category of maintenance authorized to install the listed item. The code is:

<i>Code</i>	<i>Explanation</i>
O _____	Organizational maintenance

- (3) *Recoverability code.* The right hand letter in the SMR column indicates whether the item should be returned for recovery or salvage. Recoverability code is:

Note. When no code is indicated in the recoverability column, the part will be considered expendable.

<i>Code</i>	<i>Explanation</i>
R__	Applies to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.

b. Federal Stock Number, column 2. The Federal stock number for the item is indicated in this column.

c. Description, Column 3. This column indicates the Federal item name and any additional description of the item required. A part

number or other reference number is followed by the applicable five-digit Federal Supply Code for Manufacturers. Usable on Code column is not used.

d. Unit of Issue, Column 4. The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc) is indicated in this column.

e. Quantity Incorporated in Unit Pack, Column 5. Not used.

f. Quantity Incorporated in Unit, Column 6. The quantity of repair parts in an assembly is given in this column.

g. Maintenance Allowances, Column 7.

- (1) The allowance columns are divided into subcolumns. Items authorized for use as required but not for initial stockage are identified with an asterisk (*) in the allowance column.
- (2) Subsequent changes to organizational allowances will be listed as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-ME-NMP-RR, Fort Monmouth, N. J., 07703. for exception or revision to the allowance list. Revisions to the range of items authorized will be made by the USAECOM National

Maintenance Point based upon engineering experience, demand data, or TAERS information.

h. Illustrations, Column 8.

- (1) *Figure number, column 8a.* The number of the illustration in which the item is shown is indicated in this column.
- (2) *Item or symbol number, column 8b.* Not used.

A4-4. Location of Repair Parts

a. This appendix contains cross-reference index (sec III) to be used to locate a repair part when the Federal stock number is known. The first column in the cross-reference index is prepared in numerical sequence. The last column of the cross-reference index lists the index number assigned to the part.

b. Refer to the cross-reference index and note the index number in the last column; then refer to the repair parts list to locate the index number which is listed in ascending order in column 1 of the repair parts list.

5. Federal Supply Codes

This paragraph lists the Federal supply code and the associated manufacturer's name.

Code	Manufacturer
80063	Army Electronics Command
81349	Military Specifications
96906	Military Standards

SECTION II REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

(1) SMR CODE INDEX NO.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code	(4) UNIT OF ISSUE USABLE ON CODE	(5) QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) 15-DAY ORGANIZATIONAL MAINTENANCE ALW				(8) ILLUSTRATIONS	
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
A-0-R A001	6625-905-7159	TEST SET, POWER SUPPLY AN/FPM-26: SMD536471; 80063 (This item is nonexpendable)	ea							1-1	
P-0 A006	5920-681-4998	FUSE, CARTRIDGE: SMB536899; 80063	ea		1	*	*	*	*	1-1	
P-0 A054	5355-994-3435	KNOB: MS91528-1E2B; 96906	ea		1	*	*	*	*	1-1	
P-0 A055	5355-556-0145	KNOB: MS91528-1K2B; 96906	ea		7	*	*	*	*	1-1	
P-0 A056	6240-682-3411	LAMP, GLOW: NE51H; 81349	ea		7	*	*	*	*	1-1	
P-0 A057	6240-155-8706	LAMP, INCANDESCENT: MS15571-2; 96906	ea		3	*	*	*	*	1-1	
P-0 A060	6210-067-8381	LENS, INDICATOR LIGHT: LC16RN; 81349	ea		3	*	*	*	*	1-1	
P-0 A061	6210-045-7658	LENS, INDICATOR LIGHT: LC20RN; 81349	ea		7	*	*	*	*	1-1	

SECTION III INDEX-FEDERAL STOCK NUMBER CROSS REFERENCE
TO INDEX NUMBER (CONTINUED)

FEDERAL STOCK NUMBER	INDEX NO.	FEDERAL STOCK NUMBER	INDEX NO.	FEDERAL STOCK NUMBER	INDEX NO.
5355-556-0145	A055				
5355-994-3435	A054				
5920-681-4998	A006				
6210-045-7658	A061				
6210-067-8381	A060				
6240-155-8706	A057				
6240-682-3411	A056				
6625-905-7159	A001				

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-32, Section III, (unclassified) requirements for organizational maintenance literature applicable to the AN/FPA-15 and AN/FPA-16 systems.

Technical Manual

No. 11-6625-639-12

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 20315, 12 October 1965

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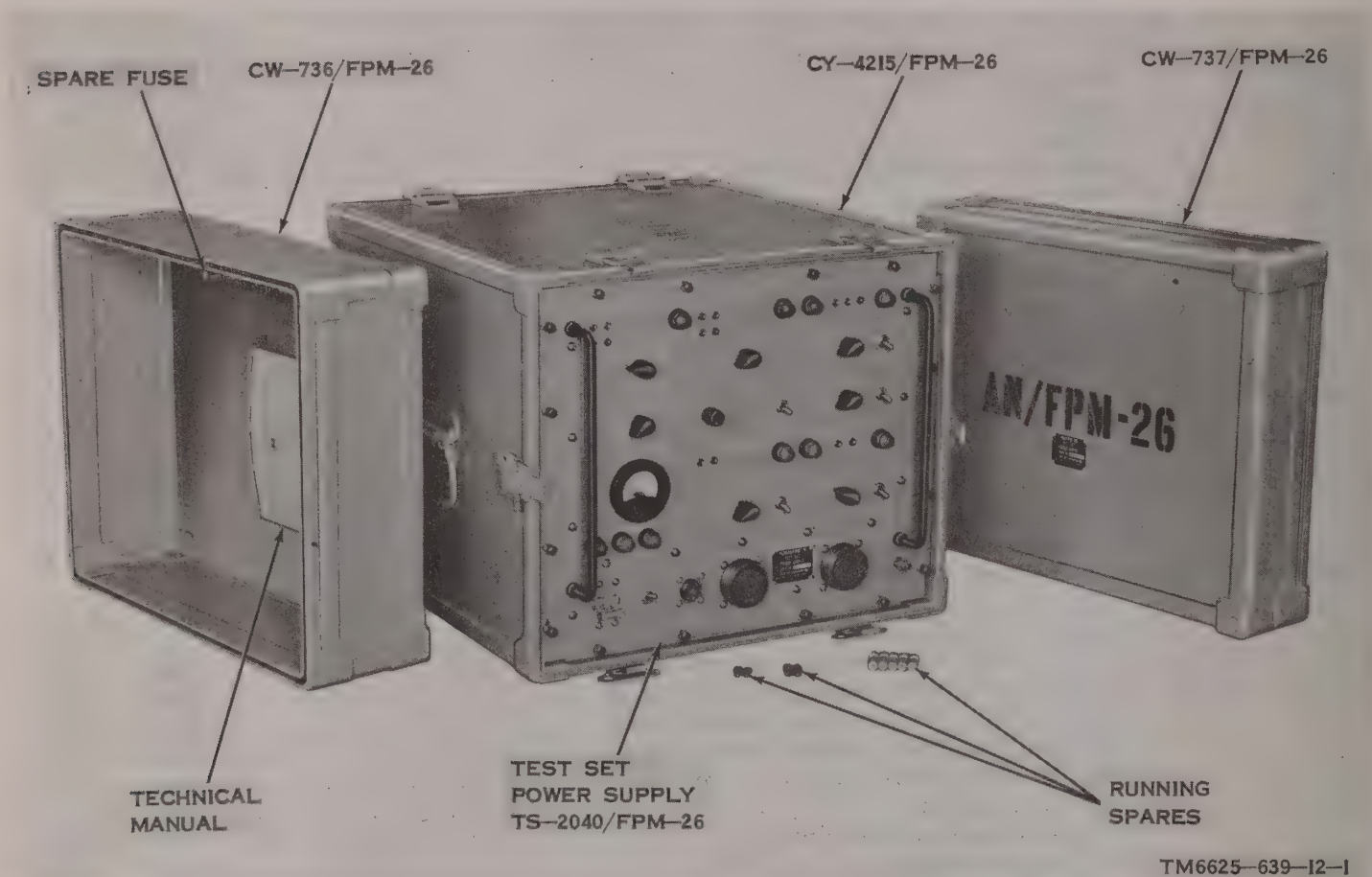


Figure 1-1. Test Set, Power Supply AN/FPM-26, Cable Assembly Kit MK-753/FPA, and running spares.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Test Set, Power Supply AN/FPM-26 and describes the use of Cable Assembly Kit MK-753/FPA (fig. 1-1). The MK-753/FPA consists of various cables used to connect the AN/FPM-26 to sources of input power and to the assembly to be tested. Included in this manual are operating instructions, preventive maintenance procedures, corrective maintenance procedures, and instructions for the replacement of parts available at the organizational level.

1-2. Index of Equipment Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment. Department of the Army Pamphlet No. 310-4 is an index of current technical manuals, technical bulletins, supply manuals (types 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders that are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc) and the latest changes to and revisions of each equipment publication.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

c. Reporting of Equipment Manual Improvements. The direct reporting of errors, omissions, and recommendations for improving this equipment manual by the individual user is authorized and encouraged. DA Form 2028 will be used for reporting these improvements. This form may be completed using pencil, pen, or typewriter. DA Forms 2028 will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-MR-(NMP)-MA, Fort Monmouth, New Jersey 07703.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

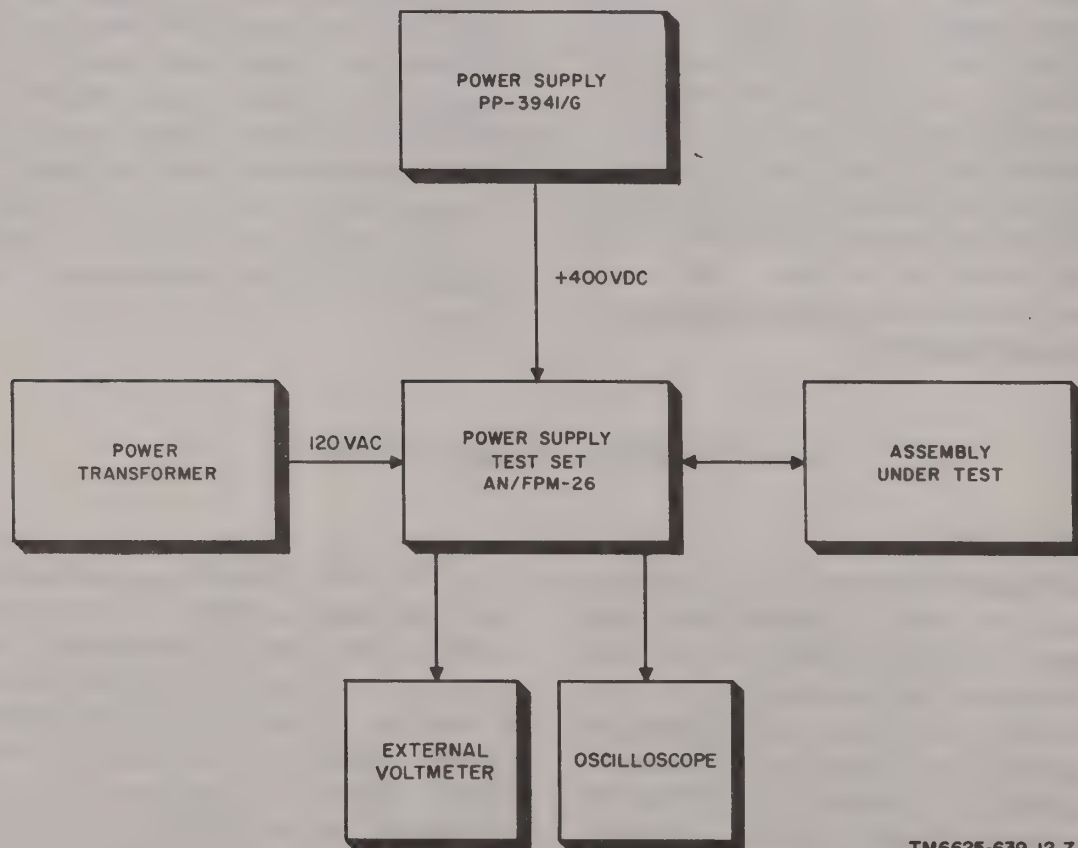
a. Test Set, Power Supply AN/FPM-26 is a portable test set used in conjunction with Cable Assembly Kit MK-753/FPA to test the power supplies of Electronic Counter-Countermeasures Console AN/FPA-15 (ECCM console) and Electronic Counter-Countermeasures Console AN/FPA-16 (ECCM console). These power supplies, which are common to both ECCM consoles, are Power Supplies PP-3741/FPA, PP-3742/FPA, PP-3743/FPA, PP-3744/FPA, and PP-3745/FPA.

b. The AN/FPM-26 is used in conjunction with external sources of both alternating-current (ac) and direct-current (dc) power, and assorted general purpose test equipment, to test the operating characteristics of the dc power supplies of the ECCM consoles cited above. There is a separate area of the control panel of the AN/FPM-26 for each of the five types of power supplies that it tests. Thus, all switches and test jacks associated with a given power supply are conveniently grouped.

c. The AN/FPM-26 provides facilities which enable power supplies to be tested for output voltage regulation under both loaded and unloaded conditions, output voltage regulation under conditions of varying input voltage, and ripple voltage component of their dc output voltages. Power supply output voltages are monitored by the use of an external voltmeter or an oscilloscope (for observing ripple voltage), which is connected to test jacks on the AN/FPM-26 control panel. Toggle switches, also on the control panel, permit load switching. Test loads vary from approximately one-third of full to actual operating load. A meter on the control panel of the AN/FPM-26 permits the ac line voltage applied to a power supply under test to be continuously monitored. The ac line voltage may be varied by means of an external

variable transformer, or held at a constant voltage through the use of a TF-476/FPA.

d. The output voltages of the ECCM console power supplies may be directly monitored at the test jacks on the control panel of the AN/FPM-26 in all cases except that of Power Supply PP-3743/FPA, which generates cathode-ray tube (crt) deflection and acceleration voltages. These voltages are attenuated before appearing at the control panel test jacks. The deflection voltage (nominally +1,630 volts dc) is attenuated by a factor of 10; the acceleration voltage (nominally -6,400 volts dc) is attenuated by a factor of 100. In addition, dc power supplies internal to the AN/FPM-26 are used to provide voltages for testing the monitoring circuits of Power Supply PP-3743/FPA.



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Figure 1-2. Test Set, Power Supply AN/FPM-26 and additional test equipment, block diagram.

e. The AN/FPM-26 cannot be used by itself to test the power supplies of the ECCM consoles. Figure 1-2 shows the relationship of the AN/FPM-26 to the additional test equipment required (para 1-8).

1-5. Technical Characteristics

a. Inputs.

Ac voltage 115 vac, 60 \pm 3 cps (\pm 0.6 cps when using TF-476/FPA), 10 amp.

Dc voltage. +400 \pm 4 vdc at 100 ma.

b. Outputs.

Ac voltage 108 to 132 vac variable (when using TF-171/USM, 60 \pm 3 cps.
118 vac \pm 3% (when using TF-476/FPA), \pm 0.6 cps.

Dc voltages +400 \pm 4 vdc at 100 ma,
+6 \pm 0.3 vdc at 1 ma,
-6 \pm 0.3 vdc at 1 ma,
+12 \pm 0.6 vdc at 15 ma,
-12 \pm 0.6 vdc at 60 ma,
-26 \pm 1.3 vdc at 80 ma,
-28 \pm 1.4 vdc at 15 ma,
+150 \pm 7.5 vdc at 15 ma,
+275 \pm 14 vdc at 15 ma,
-275 \pm 14 vdc at 15 ma,
+300 \pm 15 vdc at 15 ma.

1-6. Components of Test Set, Power Supply AN/FPM-26 (fig. 1-1)

Note. This listing is based on the original shipment on Order No. FR 36-039-N-5-00102(E). For the current official listing, see the basic issue items list, appendix II.

Quantity	Item	Dimensions (in.)			Unit weight (lb)
		Height	Depth	Width	
1	Test Set, Power Supply TS-2040/FPM-26.	16	23-3/4	19	60
1	Case, Test Set, Power Supply CY-4215/FPM-26 (with Cover, Test Set Case CW-736/FPM-26 and Cover, Test Set Case CW-737/FPM-26).	18-13/32	31-19/32	21-17/32	56
2	TM 11-6625-639-12 Running spares: 5 ea fuses, slo-blo, cartridge-type, 0.125 amp, 500 volts. 2 ea lamp, incandescent, type TB-14, 0.15 amp, 6.3 volts. 2 ea lamp, glow, miniature, bayonet base, 0.002 amp, 110/125 volts.				

1-7. Description of Test Set, Power Supply AN/FPM-26

Test Set, Power Supply AN/FPM-26 is mounted in a laminated metal and plywood case having both front and rear covers. Both covers are removed when the AN/FPM-26 is placed in operation. A number of connector jacks are on the rear panel of the AN/FPM-26; additional connector jacks, test jacks, and all operating controls and indicators are on the front panel. An interlock switch mounted on the rear of the chassis of the AN/FPM-26 opens if the chassis is removed from the center section

of the case. Cooling air is provided by a fan at the rear of the chassis.

1-8. Additional Equipment Required

The following equipment is not supplied with Test Set, Power Supply AN/FPM-26 but must be available for use during test operations:

a. *Cable Assembly Kit MK-753/FPA.* The MK-753/FPA is required to connect the AN/FPM-26 to external power sources and the ECCM console assembly to be tested.

b. *Power Supply PP-3941/G.* The PP-3941/G is needed to furnish +400 volts dc

at 100 milliamperes (ma) through the AN/FPM-26 during performance tests of Power Supply PP-3741/FPA.

c. *Transformer, Power, Variable TF-171/USM*. The TF-171/USM is used to vary voltage from 108 to 132 volts during line regulation tests of the ECCM console power supplies.

d. *Transformer, Power, Voltage Regulating TF-476/FPA (Part of Test Facilities Kit MK-754/FPA)*. The TF-476/FPA is used to maintain constant ac line voltage when Power Supply PP-3743/FPA is tested.

e. *Multimeter ME-26B/U or Electronic Voltmeter AN/USM-98 (External Voltmeter)*. These instruments are used to measure output voltages of ECCM console power supplies under test by use of test jacks on the AN/FPM-26 front panel.

f. *Oscilloscope AN/USM-81 (Oscilloscope)*. The oscilloscope is used to measure the ripple voltage component of the output voltages of the ECCM console power supplies under test by use of test jacks on the AN/FPM-26 front panel.

CHAPTER 2

INSTALLATION

2-1. Unpacking

a. Packaging Data. When packed for shipment, the AN/FPM-26 is separately wrapped in a polyethylene bag together with the required amount of desiccant; then it is packaged in a double-wall inner fiberboard carton. The carton is covered with a moisture-vaporproof barrier, heat sealed, and enclosed in a water-resistant, triple-wall, fiberboard carton. The outer fiberboard carton is sealed with a water-resistant, pressure-sensitive tape and bound with reinforced nylon pressure-sensitive strapping tape. The shipping box and its contents are shown in figure 2-1. The shipping box is 22 by 34 by 24 inches, its volume is 10.4 cubic feet, and it weighs 150 pounds.

b. Removing Contents.

- (1) Cut the strapping tape that secures the outer container and open the flaps on its top.
- (2) Remove the inner carton that is wrapped in the waterproof barrier.
- (3) Remove the moisture-vaporproof barrier and open the inner carton.
- (4) Remove the equipment from the inner carton.
- (5) Remove the polyethylene plastic covering from the equipment.

2-2. Checking Unpacking Equipment

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (para 1-3).

b. See that the equipment is complete as listed on the packing slip. If a packing slip is not available, check the equipment against the basic issue items list (appx II). Report all discrepancies in accordance with TM 38-750. Shortage of a minor assembly or part that does not affect proper functioning of the equipment should not prevent its use.

c. If the equipment has been used or reconditioned, see whether it has been changed by a modification work order (MWO). If the equipment has been modified, the MWO

number will appear on the front panel near the nomenclature plate. If modified, see that any operational instruction changes resulting from the modification have been entered in the equipment manual.

Note. Current MWO's applicable to the equipment are listed in DA Pam 310-4.

2-3. Placement of Equipment

The AN/FPM-26 can be operated from a bench location. The location selected must provide ample space to position all the equipment involved in the test setup (para 3-8). Sufficient room must be available in front of the AN/FPM-26 panel to allow free access to all controls during testing or troubleshooting of ECCM console power supplies.

2-4. Seating of Fuse

The AN/FPM-26 is shipped with its fuse installed.

a. See that a 0.125-ampere, 500-volt fuse is installed in the fuseholder 1/8 AMP (fig. 1-1 and 3-1).

b. Check to see that the spare for the above fuse is installed in the clip inside the front cover.

2-5. Connections

(fig. 3-1 and 3-2)

After the AN/FPM-26 has been mounted on the test bench, it must be connected to external sources of both dc power and primary ac power before it can be placed in operation. Cables W7 through W10 of the MK-753/FPA are used to supply power to the power input connectors on the rear panel of the AN/FPM-26. Instructions for connecting the AN/FPM-26 to the unit to be tested are given in chapter 3. Power input connections are made as follows:

a. To connect the dc power input (+400 volts dc), connect the connector plug of cable W10 to +400 VDC jack J2 on the AN/FPM-26 and terminal lugs E1 and E2

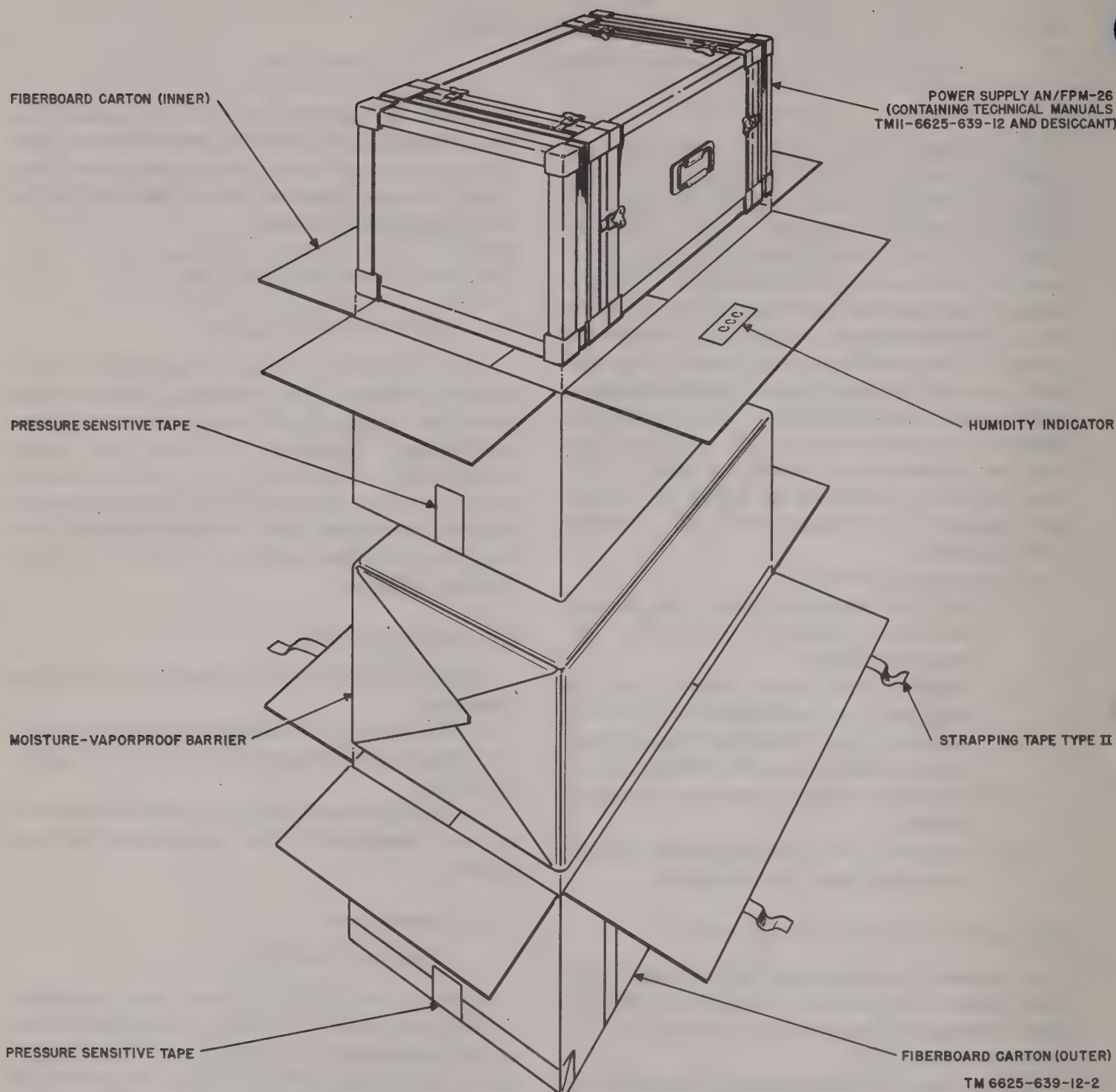


Figure 2-1. Packaging of AN/FPM-26.

to the HV+ and HV- binding posts, respectively, on the PP-3941/G.

b. Use cable W7 to connect a source of primary ac power to 115 VAC, 60 CPS jack J1 on the AN/FPM-26. If neither the TF-171/USM nor the TF-476/FPA is to be

used, connect dummy connector plug P1 (chained to the rear panel of the AN/FPM-26) to TF-476/FPA OR TF-171/USM jack J3.

c. If the TF-171/USM is to be used, connect the connector plug of cable W8 to TF-476/FPA OR TF-171/USM jack J3 on the

AN/FPM-26; then connect terminal lug W8E1 (IN) to binding post 2, W8E2 (IN) to binding post 5, W8E3 (OUT) to binding post 3, and W8E4 (OUT) to binding post 5 on the TF-476/FPA. Terminal lug W8E5 (GRD) should be connected to a screw on the TF-476/FPA case.

d. If the TF-476/FPA is to be used, connect it to TF-476/FPA OR TF-171/USM jack J3 on the AN/FPM-26 by the use of cable W9.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. OPERATOR'S CONTROLS AND INDICATORS

3-1. Operator's Controls, Indicators, and Connectors

Since the AN/FPM-26 is intended for use in testing five specific ECCM console power supplies, the controls, test jacks, and indicators associated with the testing of each power supply are grouped in a separate area of the control panel. Controls, connectors, and indicators intended for general purpose use are on both the control (front) and rear panels of the AN/FPM-26. The controls, indicators, and connectors in each of the six areas defined above are listed, along with their functions, in paragraphs 3-2 through 3-7.

3-2. General Purpose Controls, Indicators, and Connectors

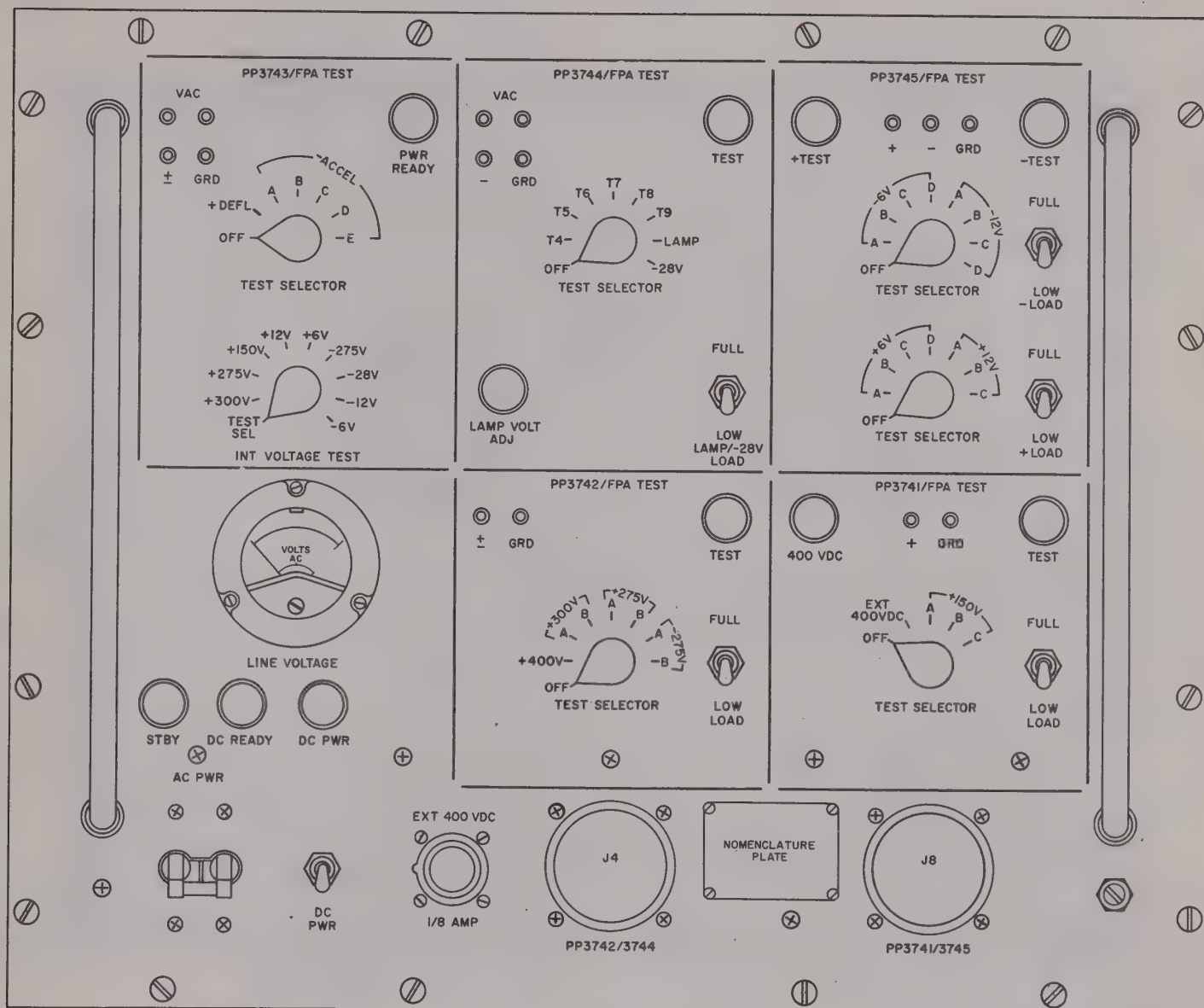
a. Front Panel (fig. 3-1).

Control, indicator connector, or fuse	Function
AC PWR circuit breaker.	Controls application of primary ac power to AN/FPM-26.
STBY indicator lamp ---	Lights when AC PWR circuit breaker is placed to on(up) position.
DC READY indicator lamp.	Lights approximately 1 minute after AC PWR circuit breaker is set to on position, indicating that AN/FPM-26 is ready for use.
DC PWR switch -----	When set to on (up) position, and DC READY indicator lamp is lighted, applies primary ac power to both front and rear panel connector jacks. Also applies +400 volts dc to switching circuits of AN/FPM-26 for testing Power Supply PP-3741/FPA.
DC PWR indicator lamp.	Lights when DC READY indicator lamp is lighted and DC PWR switch is set to on position.

Control, indicator connector, or fuse	Function
LINE VOLTAGE meter.	Used to monitor value of ac voltage applied to power supply under test.
EXT 400 VDC 1/8 AMP fuse and incicator.	Provides overload protection in +400-volt dc input line to AN/FPM-26. Indicator lights if fuse fails.
PP3741/3745 connector jack J8.	Used to connect AN/FPM-26 to either Power Supply PP-3741/FPA or Power Supply PP-3745/FPA for test purposes.
PP3742/3744 connector jack J4.	Used to connect AN/FPM-26 to either Power Supply PP-3742/FPA or Power Supply PP-3744/FPA for test purposes.

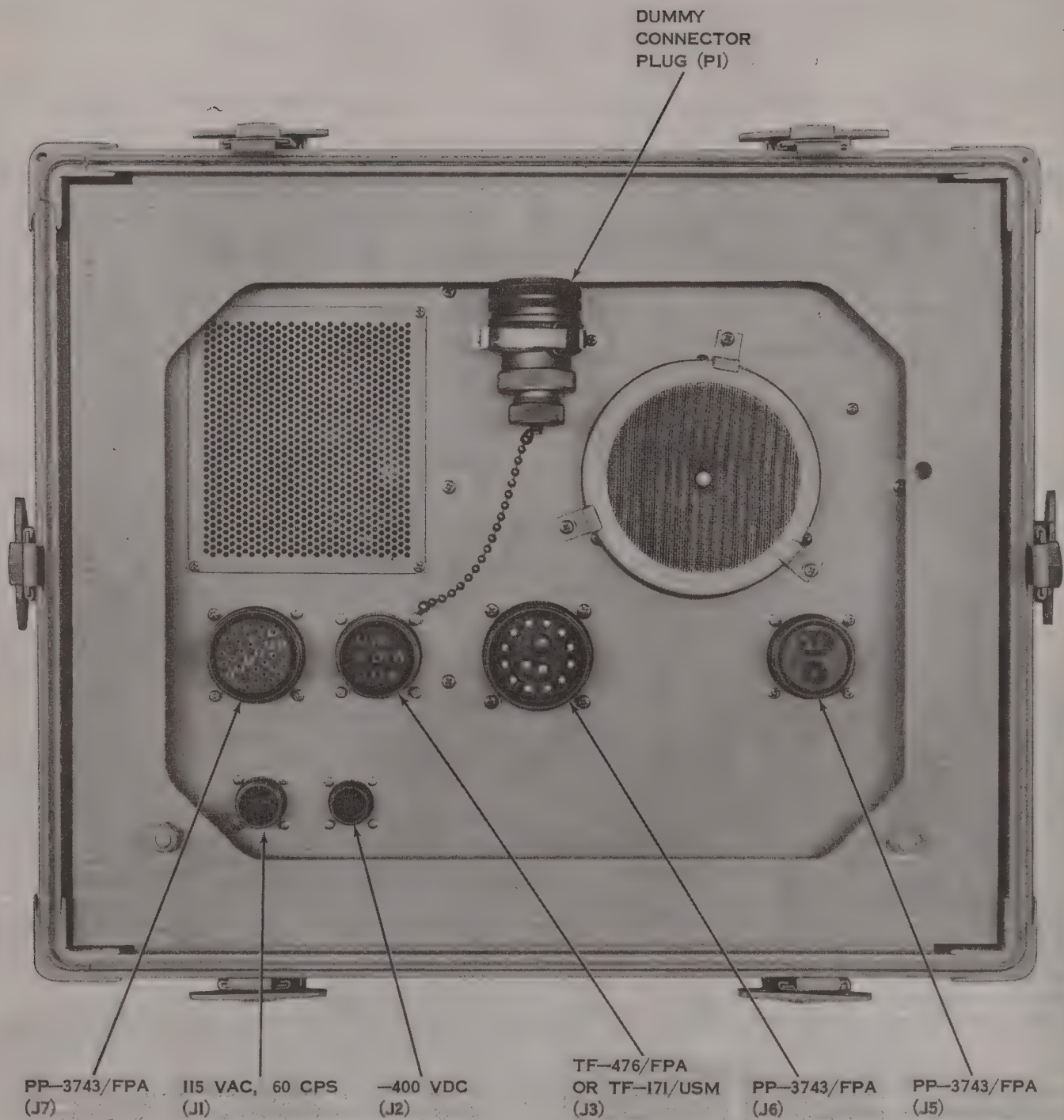
b. Rear Panel (fig. 3-2).

Control, indicator connector, or fuse	Function
115 VAC, 60 CPS connector jack J1.	Used to connect primary ac input power to AN/FPM-26.
TF-476/FPA OR TF-171/USM connector jack J3.	Used to connect either regulated or variable ac power to AN/FPM-26 from either of two transformers, the type numbers of which appear on connector jack. When dummy connector plug P1 is connected to this jack, permits AN/FPM-26 to be operated direct from a source of primary ac power.
+400 VCD connector jack J2.	Used to connect AN/FPM-26 to source of +400 volts dc (Power Supply PP-3941/G).
PP-3743/FPA connector jacks J5, J6, and J7.	Used to connect AN/FPM-26 to Power Supply PP-3743/FPA for test purposes.
Dummy connector plug P1.	Permits AN/FPM-26 to be operated direct from source of primary ac power when connected to TF-476/FPA OR TF-171/USM connector jack.



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Figure 3-1. AN/FPM-26, controls, indicators, and connectors (front panel).



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Figure 3-2. AN/FPM-26, connectors (rear panel).

3-3. PP3741/FPA TEST Area of Control Panel (fig. 3-1).

Control, indicator, or test jack	Function
TEST SELECTOR switch.	Permits +400 volts dc to be applied to Power Supply PP-3741/FPA in all positions except OFF. Also selects voltages for monitoring at + and GRD jacks as follows: <div> <div>Switch position</div> <div>At + and GRD jacks</div> </div> <div> <div>OFF</div> <div>Open</div> </div> <div> <div>EXT 400 VCD</div> <div>Externally supplied +400 volts dc.</div> </div> <div> <div>+150V A</div> <div>+150 volts dc A-output of power supply under test.</div> </div> <div> <div>+150V B</div> <div>+150 volts dc B-output of power supply under test.</div> </div> <div> <div>+150V C</div> <div>+150 volts dc C-output of power supply under test.</div> </div>
LOAD switch-----	When in FULL position, connects resistive load across output of whichever of +150-volt dc circuits of Power Supply PP-3741/FPA is being monitored, to test its full load capabilities. In LOW position, 1/3 of full resistive load is placed across output of +150-volt dc circuit being monitored.
400 VDC indicator lamp.	Lights when +400 volts dc is being applied to Power Supply PP-3741/FPA by use of the TEST SELECTOR switch.
TEST indicator lamp---	Lights when TEST SELECTOR switch is in +150V A, +150V B, or +150V C position if selected voltage is being supplied by Power Supply PP-3741/FPA.
+ and GRD test jacks---	Permit use of an external voltmeter to monitor dc voltages selected by TEST SELECTOR switch.

3-4. PP3742/FPA TEST Area of Control Panel (fig. 3-1)

Control, indicator, or test jack	Function
TEST SELECTOR switch.	Selects output voltages of Power Supply PP-3742/-FPA for monitoring at \pm and GRD jacks as follows: <div> <div>Switch position</div> <div>At \pm and GRD jacks</div> </div> <div> <div>OFF</div> <div>Open</div> </div> <div> <div>+400V</div> <div>+400 volts dc from power supply under test.</div> </div> <div> <div>+300V A</div> <div>+300 volts dc A-output of power supply under test.</div> </div> <div> <div>+300V B</div> <div>+300 volts dc B-output of power supply under test.</div> </div> <div> <div>+275V A</div> <div>+275 volts dc A-output of power supply under test.</div> </div> <div> <div>+275V B</div> <div>+275 volts dc B-output of power supply under test.</div> </div> <div> <div>-275V A</div> <div>-275 volts dc A-output of power supply under test.</div> </div> <div> <div>-275V B</div> <div>-275 volts dc B-output of power supply under test.</div> </div>
LOAD switch -----	When in FULL position, connects resistive load across output of whichever of output circuits of Power Supply PP-3742/FPA is being monitored, to test its full load capabilities. When switch is in LOW position, 1/3 of full resistive load is placed across terminals of power supply output circuit being monitored.
TEST indicator lamp---	Lights in all positions of TEST SELECTOR switch except OFF, indicating that selected voltage is being supplied by Power Supply PP-3742/FPA.
\pm and GRD test jacks---	Permit use of an external voltmeter to monitor dc voltages selected by TEST SELECTOR switch.

3-5. PP3743/FPA TEST Area of Control Panel (fig. 3-1)

Control, indicator, or test jack	Function
TEST SELECTOR switch	Selects output voltages of Power Supply PP-3743/FPA for monitoring at \pm and GRD jacks when INT VOLTAGE TEST switch is in TEST SEL position. Switch positions, and voltages appearing at test jacks are as follows:
<div>Switch position</div> <div>At \pm and GRD jacks</div>	
OFF	Open
+DEFL	+165 volts dc nominal representing 10:1 attenuated deflection voltage output of Power Supply PP-3743/FPA.
-ACCEL A	-64 volts dc nominal representing 100:1 attenuated output of acceleration voltage A-output of power supply under test.
-ACCEL B	-64 volts dc nominal representing 100:1 attenuated output of acceleration voltage B-output of power supply under test.
-ACCEL C	-64 volts dc nominal representing 100:1 attenuated output of acceleration voltage C-output of power supply under test.
-ACCEL D	-64 volts dc nominal representing 100:1 attenuated output of acceleration voltage D-output of power supply under test.
-ACCEL E	-64 volts dc nominal representing 100:1

Control, indicator, or test jack	Function
INT VOLTAGE TEST switch.	<div>Switch position</div> <div>At \pm and GRD jacks</div> attenuated output of acceleration voltage E-output of power supply under test.
PWR READY indicator lamp.	Permits monitoring of outputs of Power Supply PP-3743/FPA (as selected by TEST SELECTOR switch) at \pm and GRD jacks when in TEST SEL position. In the remaining nine positions, permits selection of individual dc output voltages of AN/FPM-26 for application to monitoring circuits of power supply under test. These nine positions are: +300V, +275V, +150V, +12V, +6V, -275V, -28V, -12V, and -6V.
\pm and GRD test jacks---	Lights, after a time delay, when ac power is applied to high dc voltage circuits of Power Supply PP-3743/FPA. Time delay is introduced by relay in primary ac circuit of power supply under test.
VAC test jacks -----	Permit use of external voltmeter to monitor either attenuated high dc voltage outputs of Power Supply PP-3743/FPA; or dc output voltages of AN/FPM-26, which are applied to power supply under test.
	Permit use of an external voltmeter to monitor 6.3-volt ac filament voltage output of Power Supply PP-3743/FPA.

3-6. PP3744/FPA TEST Area of Control Panel (fig. 3-1)

Control, indicator, or test jack	Function
TEST SELECTOR switch.	Selects ac and dc voltages from Power Supply PP-3744/FPA for monitoring at VAC jacks and - and GRD jacks. Voltage present at VAC test jacks or - and GRD test jacks in each switch position is as follows:

Control, indicator, or test jack	Function	Control, indicator, or test jack	Function
	<i>Switch position</i> OFF Open T4 6.3 volts ac T5 6.3 volts ac T6 6.3 volts ac T7 6.3 volts ac T8 6.3 volts ac T9 6.3 volts ac LAMP 0 to -26 volts dc -28V -28 volts dc		<i>Switch position</i> -6V B -6 volts dc B-output of power supply under test. -6V C -6 volts dc C-output of power supply under test. -6V D -6 volts dc D-output of power supply under test. -12V A -12 volts dc A-output of power supply under test. -12V B -12 volts dc B-output of power supply under test. -12V C -12 volts dc C-output of power supply under test. -12V D -12 volts dc D-output of power supply under test.
TEST indicator lamp ---	Lights in all positions of TEST SELECTOR switch except OFF, indicating that selected voltage is being supplied by Power Supply PP-3744/FPA.		
LAMP VOLT ADJ potentiometer.	Permits lamp voltage supplied by PP-3744/FPA power supply under test to be varied over range from 0 to -26 volts dc.		
LAMP/-28V LOAD switch.	In FULL position, connects a resistive load across either lamp voltage or -28-volt dc circuit of Power Supply PP-3744/FPA (as selected by TEST SELECTOR switch), to test its full load capabilities. When switch is in LOW position, 1/3 of full load is connected across output of selected circuit		
VAC test jacks -----	Permit use of external voltmeter to monitor 6.3-volt ac circuits of Power Supply PP-3744/FPA as selected by TEST SELECTOR switch.		
- and GRD test jacks ---	Permit use of an external voltmeter to monitor lamp voltage and -28-volt dc circuits of Power Supply PP-3744/FPA as selected by TEST SELECTOR switch.		
		TEST SELECTOR switch for positive voltages.	Selects positive dc output voltages of Power Supply PP-3745/FPA for monitoring at + and GRD jacks as follows:
			<i>Switch position</i> OFF Open. +6V A +6 volts dc A-output of power supply under test. +6V B +6 volts dc B-output of power supply under test. +6V C +6 volts dc C-output of power supply under test. +6V D +6 volts dc D-output of power supply under test. +12V A +12 volts dc A-output of power supply under test. +12V B +12 volts dc B-output of power supply under test. +12V C +12 volts dc C-output of power supply under test.

3-7. PP3745/FPA TEST Area of Control Panel (fig. 3-1)

Control, indicator, or test jack	Function	Control, indicator, or test jack	Function
TEST SELECTOR switch for negative voltages.	Selects negative dc output voltages of Power Supply PP-3745/FPA for monitoring at - and GRD jacks as follows:		
	<i>Switch position</i> OFF Open -6V A -6 volts dc A-output of power supply under test.		
		-TEST indicator lamp.	Lights in all positions of negative voltage TEST SELECTOR switch except OFF, indicating that selected voltage is being supplied by Power Supply PP-3745/FPA.

Control, indicator, or test jack	Function
+TEST indicator lamp--	Lights in all positions of positive voltage TEST SELECTOR switch except OFF, indicating that selected voltage is being supplied by Power Supply PP-3745/FPA.
-LOAD switch-----	In FULL position, tests full load capabilities of negative dc voltage circuit of Power Supply PP-3745/FPA selected by TEST SELECTOR switch. In LOW position, 1/3 of full load is connected across selected output circuit.

Control, indicator, or test jack	Function
+LOAD switch -----	In FULL position, tests full load capabilities of positive dc voltage circuit of Power Supply PP-3745/FPA selected by TEST SELECTOR switch. In LOW position, 1/3 of full load is connected across selected output circuit.
+, -, and GRD test jacks.	Permit use of external voltmeter to monitor positive and negative dc output voltages of Power Supply PP-3745/FPA selected by TEST SELECTOR switches.

Section II. OPERATION

3-8. Starting Procedure

a. *Preliminary.* Before attempting to start the AN/FPM-26, set its front panel controls (fig. 3-1) as follows:

Control	Position
AC PWR circuit breaker -----	Off (down).
DC PWR switch -----	Off (down).
TEST SELECTOR switches -----	OFF.
INT VOLTAGE TEST switch -----	TEST SEL.
LOAD switches -----	LOW.

b. *Test Connections.* Connect the AN/FPM-26 to the ECCM console power supply to be tested, and to additional test equipment, in accordance with the instructions given in TM 11-5840-263-35 or TM 11-5840-264-35. Instructions for connection of the AN/FPM-26 to external power sources are also provided in paragraph 2-5 of this manual. A test interconnection diagram showing a typical hookup, in this case for testing Power Supply PP-3741/FPA, is given in figure 3-3.

c. *Starting.*

- (1) Turn on Power Supply PP-3941/G and set its output voltage to +400 \pm 4 volts dc.
- (2) Place the AC PWR circuit breaker to the on position. The STBY indicator lamp will light. Check to see that the blower motor starts and that there is an indication on the LINE VOLTAGE meter. The DC

READY indicator lamp will light after an approximately 1-minute delay.

- (3) Adjust the TF-171/USM for a 120-volt ac indication on the LINE VOLTAGE meter.
- (4) Place the DC PWR switch to the on position. The DC PWR indicator lamp will light.

Note. If an abnormal indication is obtained during the starting procedures, refer to the operator's daily preventive maintenance checks and services chart (para 4-5) for corrective measures.

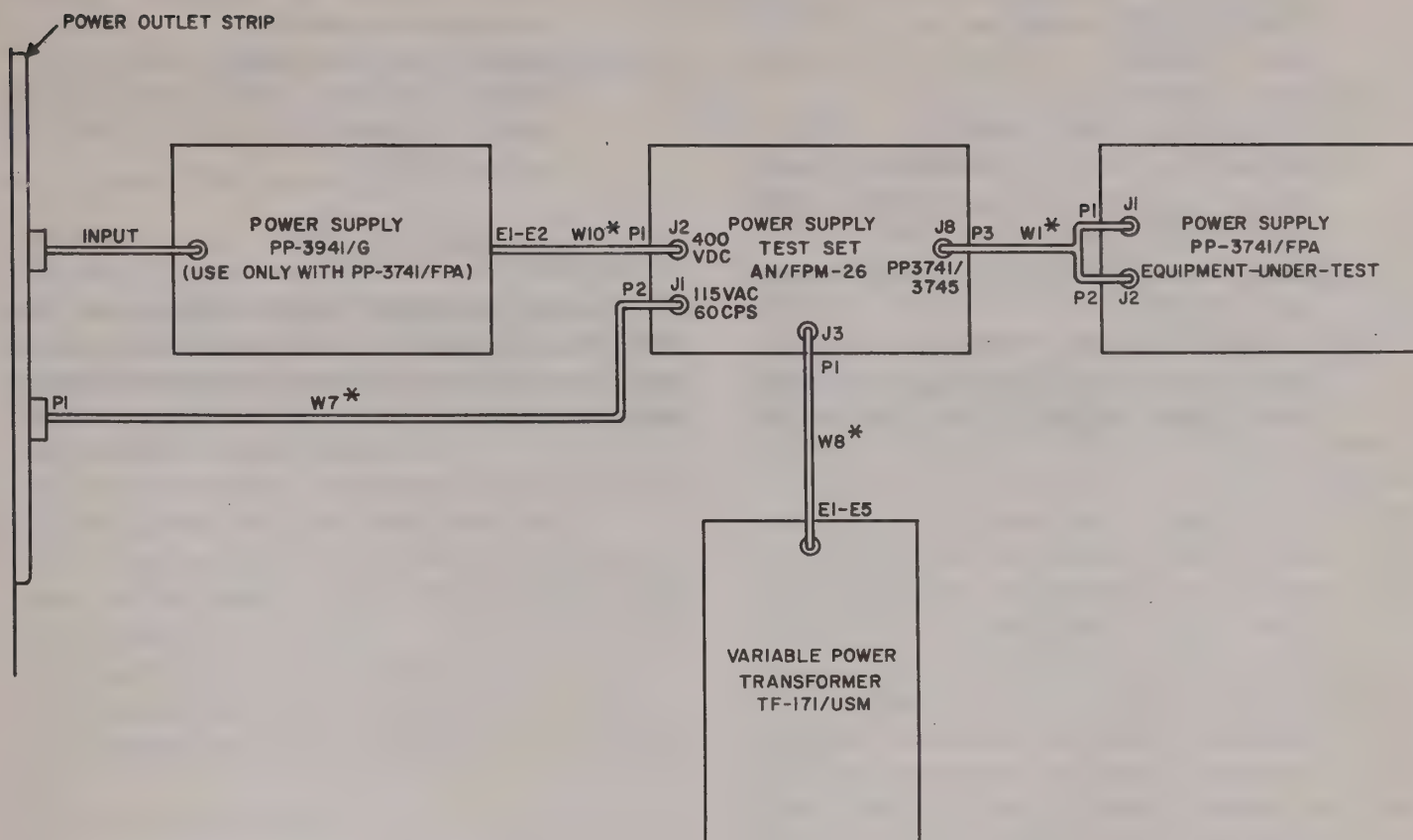
3-9. Typical Operating Procedures

Note. The following procedures apply specifically to the testing of Power Supply PP-3741/FPA; however, they are typical of those used in testing all five ECCM console power supplies, with the major exception that no external source of +400 volts dc is required to test the other four power supplies.

Start the AN/FPM-26 as described in paragraph 3-8 and, using the controls in the PP3741/FPA TEST area of the control panel, proceed as follows:

a. *Preliminary Check.*

- (1) Place the TEST SELECTOR switch at EXT 400VDC and check to see that the 400 VDC indicator lamp lights.
- (2) Connect an external voltmeter to the + and GRD test jacks. The meter should indicate +400 \pm 4 volts dc. If it does not, adjust the output volt-



*CABLES-PART OF CABLE ASSEMBLY KIT MK-753/FPA.

TM6625-639-12-6

Figure 3-3. Typical test connection.

age of Power Supply PP-3941/G to the proper level.

b. Power Supply Load Regulation Test.

- (1) Place the TEST SELECTOR switch at +150V A.
- (2) Connect an external voltmeter to the + and GRD test jacks. The voltmeter should indicate $+150 \pm 1.5$ volts dc. Do not disconnect the external voltmeter.
- (3) Place the LOAD switch at FULL. The external voltmeter should indicate $+150 \pm 1.5$ volts dc.
- (4) Return the LOAD switch to LOW position and repeat the procedures given in (2) and (3) above with TEST SELECTOR switch set to +150V B and +150V C.

c. Power Supply Line Regulation Test.

- (1) Place the LOAD switch at FULL.
- (2) Place the TEST SELECTOR switch at +150V A.
- (3) Adjust the TF-171/USM for an indication of 108 volts ac on the LINE VOLTAGE meter.
- (4) Connect an external voltmeter to the + and GRD test jacks. The voltmeter should indicate $+150 \pm 1.5$ volts dc. Do not disconnect the external voltmeter.
- (5) Adjust the TF-171/USM for an indication of 132 volts ac on the LINE VOLTAGE meter. The external voltmeter should indicate $+150 \pm 1.5$ volts dc.
- (6) Repeat the procedures given in (3),

(4), and (5) above with the TEST SELECTOR switch set to +150V B and +150V C.

d. Ripple Voltage Test

- (1) Place the LOAD switch at FULL.
- (2) Adjust the TF-171/USM for an indication of 120 volts ac on the LINE VOLTAGE meter.
- (3) Place the TEST SELECTOR switch at +150V A.
- (4) Connect the AN/USM-81 to the + and GRD test jacks and measure the ripple voltage. The value ob-

tained must be less than 20 millivolts peak-to-peak.

- (5) Repeat the procedure given in (4) above with the TEST SELECTOR switch successively set to +150 V B and +150V C.

3-10. Stopping Procedure

To stop the AN/FPM-26, place the AC PWR circuit breaker to the off position; then place the DC PWR switch to the off position and all TEST SELECTOR switches to OFF.

CHAPTER 4

MAINTENANCE INSTRUCTIONS

4-1. Scope of Maintenance

Maintenance duties for the AN/FPM-26 are listed below, together with a reference to the paragraphs covering the specific maintenance function. These duties do not require special tools or test equipment.

- a. Operator's daily preventive maintenance checks and services (para 4-5).
- b. Organizational weekly preventive maintenance checks and services (para 4-6).
- c. Organizational quarterly preventive maintenance checks and services (para 4-7).
- d. Cleaning (para 4-8).
- e. Touchup painting (para 4-9).
- f. Troubleshooting (para 4-10).
- g. Replacements (para 4-13).

4-2. Materials Required

Materials required for maintenance are as follows:

- a. Cleaning compound (Federal stock No. 7930-395-9542).
- b. Cleaning cloth.
- c. Fine sandpaper.

4-3. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. *Systematic Care.* Procedures given in paragraphs 4-4 through 4-9 cover routine systematic care essential to proper upkeep and operation of the equipment.

b. *Preventive Maintenance Checks and Services.* The preventive maintenance checks and services charts (para 4-5, 4-6, and 4-7) outline functions to be performed at specific intervals. These checks and services are intended to maintain the AN/FPM-26 in a serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist in maintaining serviceability, the charts indicate what to check, how to check, and the normal conditions. The *References* column lists the paragraphs or manual that contain corrective procedures. If the defect cannot be remedied by performing the corrective actions indicated, higher level maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

4-4. Preventive Maintenance Checks and Service Periods

Preventive maintenance checks and services of the AN/FPM-26 are required daily, weekly, and quarterly. Paragraph 4-5 specifies checks and services that must be accomplished on a daily basis. Paragraphs 4-6 and 4-7 specify additional checks and services that must be performed on a weekly and a quarterly basis, respectively.

4-5. Operator's Daily Preventive Maintenance Checks and Service Charts

Sequence No.	Items to be inspected	Procedures	References
1	AN/FPM-26 -----	See that the AN/FPM-26 is complete (para 1-6).	Para 4-8.
2	AN/FPM-26 -----	Check to see that no dust, dirt, or grease is evident on the case or the front and rear panels.	
3	Controls and indicators -----	Check switches and control knob for looseness and binding. Check indicator lenses for looseness.	

Sequence No.	Items to be inspected	Procedures	References
4	LINE VOLTAGE meter -----	Check meter for damaged glass, sticking, or bent needle.	
5	AN/FPM-26 -----	Connect the AN/FPM-26 to external power sources in accordance with paragraph 2-5. Connect dummy connector plug P1 to TF-476/FPA OR TF-171/USM jack. Set controls in accordance with paragraph 3-8a. Set Power Supply PP-3941/G to provide +400 ±4 volts dc.	
6	AC PWR circuit -----	Place AC PWR circuit breaker to on position. STBY indicator lamp will light and blower motor will start. LINE VOLTAGE meter will indicate value of ac line voltage. After a 1-minute delay, DC READY indicator lamp will light.	Para 4-10.
7	DC PWR switch -----	Set to on position. DC PWR indicator lamp will light.	Para 4-10.
8	TEST SELECTOR switch in PP-3741/FPA TEST area of control panel.	Place to EXT 400VDC position. 400VDC indicator lamp will light	Para 4-10; if fuse-indicator lamp lights, para 4-13.

4-6. Organizational Weekly Preventive Maintenance Checks and Services Chart

Checks and services specified in this chart are to be performed on a weekly basis.

Sequence No.	Items to be inspected	Procedures	References
1	Connectors -----	Check cable connectors, mating plugs, and jacks to be sure they are clean, intact, and corrosion free.	Para 4-8.
2	Handles and latches -----	Check handles, latches, and hinges for looseness. Tighten as necessary.	
3	Metal surfaces -----	Inspect painted surfaces for spots, rust, and corrosion. Clean and touch up paint as required.	Para 4-8 and 4-9.

4-7. Organizational Quarterly Preventive Maintenance Checks and Services Chart

Checks and services specified in this chart are to be performed quarterly.

Sequence No.	Items to be inspected	Procedures	References
1	Publications -----	See that this publication is complete, serviceable, and current.	
2	Modifications -----	Check DA Pam 310-4 to determine if new applicable MWO's have been published. All URGENT MWO's must be applied immediately. All NORMAL MWO's must be scheduled.	

Sequence No.	Items to be inspected	Procedures	References
3	Spre parts -----	Check all spare parts for general condition and method of storage.	

4-8. Cleaning

a. Inspect the exterior surfaces of the AN/FPM-26 case and the front and rear panels of the AN/FPM-26. Remove dust with a clean lint-free cloth, and dirt from plugs and jacks with a brush. Clean the front panel meter and control knobs with a soft clean cloth.

Warning: PROLONGED BREATHING OF CLEANING COMPOUND IS DANGEROUS; MAKE CERTAIN THAT ADEQUATE VENTILATION IS PROVIDED. CLEANING COMPOUND IS FLAMMABLE; do not USE NEAR A FLAME. AVOID CONTACT WITH THE SKIN; WASH OFF ANY THAT SPILLS ON YOUR HANDS.

b. For best results, clean the cases and front panel controls with a clean, lint-free cloth; use cleaning compound (Federal stock No. 7930-395-9542) to remove any grease and/or ground-in dirt.

4-9. Touchup Painting Instructions

Remove rust and corrosion from metal surfaces by lightly sanding with fine sandpaper. Brush two thin coats of paint on the bare metal to protect it from further cor-

rosion. Refer to the applicable cleaning and refinishing practices specified in TB SIG 364.

4-10. General Troubleshooting Information

Troubleshooting the AN/FPM-26 is based upon the operational check contained in the operator's daily preventive maintenance checks and services chart. To troubleshoot the AN/FPM-26, perform all functions starting with item No. 5 in the operator's daily preventive maintenance checks and services chart (para 4-5) and proceed through the items until an abnormal condition or result is observed. When an abnormal condition or result is observed, note the item number and turn to the corresponding item number in the troubleshooting chart (para 4-11). Perform the checks and corrective actions indicated in the troubleshooting chart. If the corrective measures indicated fail to correct the trouble, or if the item number does not appear in the troubleshooting chart, higher level maintenance is required. Paragraphs referenced in the troubleshooting chart provide additional information and step-by-step instructions for the replacement of defective components.

4-11. Troubleshooting Chart

Item No.	Symptom	Probable cause	Checks and corrective measures
6	STBY indicator lamp does not light.	Burned out STBY indicator lamp DS1.	Replace STBY indicator lamp DS1 (para 4-13). If this does not correct trouble, check ac power input circuit (para 4-12).
	DC READY indicator lamp does not light after 1-minute time delay.	Burned out DC READY indicator lamp DS2.	Replace DC READY indicator lamp DS2 (para 4-13).
7	DC PWR indicator lamp does not light.	Burned out DC PWR indicator lamp DS3.	Replace DC PWR indicator lamp DS3 (para 4-13).
8	400 VDC indicator lamp does not light.	Burned out 400 VDC indicator lamp DS10.	Replace 400 VDC indicator lamp DS10 (para 4-13). If this does not correct the trouble, check dc power input circuit (para 4-12).

4-12. Supplementary Troubleshooting Information

a. Ac Power Input Circuit Troubleshooting.

If it becomes apparent that ac power is not being applied to the AN/FPM-26, disconnect cable W7 from both the power source and the AN/FPM-26; then use an ME-26B/U or equivalent to check for continuity between pin A of one connector plug and the broad blade of the other, pin B and the narrow blade, and pin C and the ground pin. If continuity is obtained, the cable is good, indicating that either there is a malfunction in the power source or in the AN/FPM-26 itself, and higher level maintenance is required.

b. Dc Power Input Circuit Troubleshooting. Should it appear that no +400-volt dc power is being applied to the AN/FPM-26, disconnect cable W10 from both the AN/FPM-26 and Power Supply PP-3941/G; then check for continuity between pin A of the connector plug and terminal lug E1, and between pin B of the connector plug and terminal lug E2. If continuity is obtained, the trouble is probably in Power Supply PP-3941/G.

4-13. Replacements of Fuse and Indicator Lamps

a. Replacement of Fuse.

- (1) Press in on the fuse cap and turn it counterclockwise to unlock. Remove the cap and the fuse.
- (2) Insert a fuse of the same rating in the cap.
- (3) Replace the cap and the fuse in the fuseholder. Tighten by pressing in and turning the cap clockwise.

Caution: IF THE FUSE BURNS OUT IMMEDIATELY AFTER REPLACEMENT, DO NOT REPLACE IT A SECOND TIME; HIGHER LEVEL MAINTENANCE IS REQUIRED.

b. Replacement of Indicator Lamps.

- (1) Unscrew the indicator cap in a counterclockwise direction and remove it from the lampholder.
- (2) Press in on the lamp and turn it counterclockwise to unlock it.
- (3) Pull the defective lamp out and replace it with a new one of the same type.
- (4) Replace the indicator cap.

CHAPTER 5

SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

5-1. Disassembly of Equipment

To prepare the AN/FPM-26 for shipment and storage, proceed as follows:

a. Disconnect all cabling from the AN/FPM-26.

b. Replace front and rear covers of the AN/FPM-26 and secure them with the fasteners on the case.

5-2. Repackaging for Shipment or Limited Storage

The exact procedure for repackaging depends on the material available and the conditions under which the equipment is to be shipped or stored. Adapt the procedures outlined below whenever circumstances permit. Information concerning the original packaging (para 2-1) will also be helpful.

a. Material Requirements. The following materials are required for packaging the AN/FPM-26. For stock numbers of materials, refer to SB 38-100.

Material	AN/FPM-26 (quantity)
Barrier material, waterproof -----	35 sq ft.
Tape, cloth backing, waterproof ---	As required.
Fiberboard corrugated -----	71 sq ft.
Desiccant -----	60 units
Humidity indicator -----	1.

b. Packing.

- (1) Place the equipment to be packed and desiccant bags in the inner corrugated fiberboard carton (fig. 2-1).
- (2) Place technical manuals (if applicable) in a waterproof envelope, seal with waterproof tape, and place them in the inner carton.
- (3) Tape the humidity indicator to the inside surface of one of the inside flaps of the inner carton.
- (4) Close the flaps of the inner carton and seal with waterproof tape.
- (5) Wrap the inner carton in moisture-vaporproof barrier material and secure it with waterproof tape.
- (6) Insert the wrapped inner carton into the outer corrugated fiberboard carton, close the flaps, and seal with waterproof tape.

Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

5-3. Authority for Demolition

Demolition procedures given in paragraph 5-4 will be used to prevent the enemy from using or salvaging this equipment. Demolition of the equipment will be accomplished only upon the order of the commander.

5-4. Methods of Destruction

The tactical situation and time available will determine the method of equipment destruction to be employed. Any or all

methods described below may be used. In most cases, it is preferable to demolish completely some portions of the equipment rather than partially destroy all the equipment components.

a. Smash. Use sledges, axes, hammers, crowbars and any other heavy tools available to smash the control panel and interior circuitry of the AN/FPM-26.

- (1) Use the heaviest tool on hand to destroy the meter, connectors, switches, and knobs of the AN/FPM-26.

Note. Heavy tools with effectively destroy the external parts mentioned in (1) above, but the remainder of exposed surfaces of the equipment are constructed of steel plate; attempts to destroy them by smashing will be useless.

- (2) Remove the AN/FPM-26 from its case. With a heavy hammer or bar, smash as many of the exposed parts of this chassis as possible.

Warning: BE EXTREMELY CAREFUL WITH EXPLOSIVES AND INCENDIARY DEVICES. USE THESE ITEMS ONLY WHEN THE NEED IS URGENT.

b. Burn. Burn as much of the equipment as possible. Use gasoline, oil, or flamethrowers. Burn the manuals first. Pour gasoline on the cut cables and internal wiring and ignite. Use a flamethrower to burn spare parts or pour gasoline on them and ignite them. Use incendiary grenades to complete the destruction of the unit.

c. Explode. Use explosives to complete dem-

olition or to cause maximum damage, before burning, when time does not permit complete demolition by other means. Powder charges, fragmentation, or incendiary grenades may be used. Incendiary grenades usually are most effective if destruction of small parts and wiring is desired.

- (1) Use a fragmentation grenade to destroy the interior of the AN/FPM-26. Partially lift the chassis from its case and drop the grenade into the interior. Get away from the unit after the grenade is placed.

- (2) For quick destruction of the AN/FPM-26, place an incendiary grenade on top of the case. Get away from the unit after the grenade is placed.

d. Dispose. Bury or scatter destroyed parts or throw them into nearby waterways. This action is particularly important if a number of parts have not been completely destroyed.

APPENDIX I

REFERENCES

Following is a list of references available to the operator and organizational repairman of Test Set, Power Supply AN/FPM-26:

DA Pam 310-4	Military Publications: Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
SB 38-100	Preservation, Packaging and Packing Materials, Supplies, and Equipment used by the Army.
TB SIG 364	Field Instructions for Painting and Preserving Electronics Command Equipment.
(C) TM 11-5840-263-12	Organizational Maintenance Manual: Console, Electronic Counter-Countermeasures AN/FPA-16(U).
(C) TM 11-5840-263-35	DS, GS and Depot Maintenance Manual: Console, Electronic Counter-Countermeasures AN/FPA-16(U).
(C) TM 11-5840-264-12	Organizational Maintenance Manual: Console, Electronic Counter-Countermeasures AN/FPA-15(U).
(C) TM 11-5840-264-35	DS, GS and Depot Maintenance Manual: Console, Electronic Counter-Countermeasures AN/FPA-15(U).
TM 11-6130-242-15	Organizational, DS, GS and Depot Maintenance Manual: Power Supply PP-3941/G.
TM 38-750	Army Equipment Record Procedure.

APPENDIX II

BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

A2-1. General

This appendix lists items supplied for initial operation and for running spares. The list includes tools, parts, and material issued as part of the major end item. The list includes all items authorized for basic operator maintenance of the equipment. End items of equipment are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning.

A2-2. Columns

Columns are as follows:

- a. Federal Stock Number.* This column lists the 11-digit Federal stock number.
- b. Designation by Model.* Not used.
- c. Description.* Nomenclature or the standard item name and brief identifying data for each item are listed in this column. When requisitioning, enter the nomenclature and description.

d. Unit of Issue. The unit of issue is each unless otherwise indicated and is the supply term by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.

e. Expendability. Nonexpendable items are indicated by NX. Expendable items are not annotated.

f. Quantity Authorized. Under "Items Comprising an Operable Equipment", the column lists the quantity of items supplied for the initial operation of the equipment. Under "Running Spare Items" the quantities listed are those issued initially with the equipment as spare parts. The quantities are authorized to be kept on hand by the operator for maintenance of the equipment.

g. Illustration. The "Figure No." column lists the figure and reference numbers used for identification of the items in the illustration.

Section II. OPERATOR'S FUNCTIONAL PARTS LIST

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
6625-905-7159		TEST SET, POWER SUPPLY AN/FPM-26: Provides loads and control circuiting to test performance of power supplies in the ECOM consoles, AN/FPA-15 and AN/FPA-16		NX		1-1	
ORD thru AGC		ITEMS COMPRISING AN OPERABLE EQUIPMENT					
6625-903-3496		TECHNICAL MANUAL TM-11-6625-639-12: (Mounted in equip)			2		
6625-908-4828		CASE, TEST SET POWER SUPPLY CY-4215/FPM-26: (Not mounted)		NX	1	1-1	
6625-908-4833		COVER, TEST SET CASE CW-736/FPM-26: (Mounted in equip)		NX	1	1-1	
6625-903-3497		COVER, TEST SET CASE CW-737/FPM-26: (Mounted in equip)		NX	1	1-1	
		TEST SET, POWER SUPPLY TS-2040/FPM-26: (Installed in equip)		NX	1	1-1	
		RUNNING SPARE ITEMS					
6240-682-3411		FUSE, CARTRIDGE: 500 v; 0.125A; Bussman Nr. F60C500V1/8A (Not mounted)			5	1-1	
6240-155-8706		LAMP, GLOW: GE Nr. NE51-H (Not mounted)			2	1-1	
		LAMP, INCANDESCENT: MIL type MS-15571-2 (Not mounted)			2	1-1	

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APPENDIX III

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

A3-1. General

a. This appendix assigns maintenance functions to be performed on components, assemblies, and subassemblies by the lowest appropriate maintenance category.

b. Columns in the maintenance allocation chart are as follows:

(1) *Part or component.* This column shows only the nomenclature or standard item name. Additional descriptive data are included only where clarification is necessary to identify the component. Components, assemblies, and subassemblies are listed in top-down order. That is, the assemblies which are part of a component are listed immediately below that component, and subassemblies which are part of an assembly are listed immediately below that assembly. Each generation breakdown (components, assemblies, or subassemblies) is listed in disassembly order or alphabetical order.

(2) *Maintenance function.* This column indicates the various maintenance functions allocated to the categories.

(a) *Service.* To clean, to preserve, and to replenish lubricants.

(b) *Adjust.* To regulate periodically to prevent malfunction.

(c) *Inspect.* To verify serviceability and detect incipient electrical or mechanical failure by scrutiny.

(d) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc.

(e) *Replace.* To substitute serviceable components, assemblies, or subassemblies, for unserviceable components, assemblies, or subassemblies.

(f) *Repair.* To restore an item to ser-

viceable condition through correction of a specific failure or unserviceable condition. This function includes but is not limited to welding, grinding, riveting, straightening, and replacement of parts other than the trial and error replacement of running spare type items such as fuses, lamps, or electron tubes.

(g) *Align.* To adjust two or more components of an electrical system so that their functions are properly synchronized.

(h) *Calibrate.* To determine, check, or rectify the graduation of an instrument, weapon, or weapons system, or components of a weapons system.

(i) *Overhaul.* To restore an item to *completely serviceable* condition as prescribed by serviceability standards developed and published by heads of technical services. This is accomplished through employment of the technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.

(j) *Rebuild.* To restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.

(3) *Operator, organization, direct support, general support, and depot.*

The symbol X indicates the categories responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Categories higher than those marked by X are authorized to perform the indicated operation.

- (4) *Tools required.* This column indicates codes assigned to each individual tool equipment, test equipment, and maintenance equipment referenced. The grouping of codes in this column of the maintenance allocation chart indicates the tool, test, and maintenance equipment required to perform the maintenance function.
- (5) *Remarks.* Entries in this column will be utilized when necessary to clarify any of the data cited in the preceding columns.

c. Columns in the allocation of tools for maintenance functions are as follows:

- (1) *Tools required for maintenance functions.* This column lists tools, test, and maintenance equipment required to perform the maintenance functions.
- (2) *Operator, organization, direct support, general support, and depot.* The dagger (†) symbol indicates the categories normally allocated the facility.
- (3) *Tool code.* This column lists the tool code assigned.

A3-2. Maintenance by Using Organizations

When this equipment is used by signal services organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including general support are authorized to the organization operating this equipment.

Section II. MAINTENANCE ALLOCATION CHART

PART OR COMPONENT	MAINTENANCE FUNCTION	ECHELON					TOOLS REQUIRED	REMARKS
		O/C	O	DS	GS	D		
TEST SET, POWER SUPPLY AN/FPW-26	service inspect test	X	X				1, 2, 6, 7	Preventive maintenance Visual
	replace repair rebuild overhaul		X		X	X	2, 7 1, 2, 6, 7 1 thru 8 1, 2, 6, 7	Input cable continuity checks Voltage and resistance checks Dynamic checks (except PP3743 test ckts) Fuses and lamps Depot facilities Shop facilities

Section III. ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	MAINTENANCE CATEGORY				TOOL CODE	REMARKS
	O/C	O	DS	D		
AN/FPM-26 (continued)						
CABLE ASSEMBLY KIT MK-753/FPA	+	+	+	+	1	
MULTIMETER, METER ME-26B/U	+	+	+	+	2	
POWER SUPPLY PP-3938/G				+	3	
POWER SUPPLY PP-3939/G				+	4	
POWER SUPPLY PP-3940/G				+	5	
POWER SUPPLY PP-3941/G	+	+	+	+	6	
TOOL KIT, ELECTRONIC EQUIPMENT REPAIR TK-100/G	+	+	+	+	7	
TRANSFORMER, POWER VARIABLE TF-171/USM				+	8	
NOTE: Above tool and test equipment is available for the AN/FPA-15 and -16 with which this equipment is used.						

AN/FPM-26

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-32, Section III (Unclass) requirements for Organizational Maintenance Literature applicable to the AN/FPA-15 and AN/FPA-16 Systems.

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